

28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959); M.P.E.P. §2143.01.

The Martin reference, Igaki reference, and Buchanan reference do not disclose each and every element recited in Claim 1. Claim 1 recites:

A system for measuring a property of a liquid, comprising:  
a immersible container having a cap, a bottom, an enclosed piezoelectric sensor device and at least one of a liquid inlet and liquid outlet,  
the immersible container being immersed in the liquid during a measurement of the property of the liquid,  
**the piezoelectric sensor device being completely immersed in the liquid during the measurement of the property of the liquid,**  
the sensor including:  
electric contact points for an electric control and which are resistant to the liquid;  
electric lead conductors which are resistant to the liquid and which are connectable to a measuring unit outside the liquid; and  
a suitable conductive adhesive containing metal particles and for coupling the electric lead conductors to the electric contact points.

The Buchanan reference discloses using Piezo bars in a probe to measure the viscosity of a fluid. The Examiner cites the Buchanan reference for teaching an immersible container, and the Examiner concludes that it would have been obvious to "mount Martin's crystal in a protective container." However, the Buchanan reference does not disclose "the piezoelectric sensor device being **completely immersed** in the liquid during the measurement of the property of the liquid." Instead, according to the Buchanan reference, the Piezo bars are not immersed in the liquid. Specifically, the Buchanan reference discloses:

The operating and operated Piezo bars, their connecting arms, driver and driven discs are preferably housed in a cylindrical housing with aperture means on the base and further side aperture means on the side of the probe at a point above the driver and driven discs, whereby when the probe is immersed, generally upright, in the fluid to be tested to a level above the side aperture means the driver and driven discs are fully immersed in the fluid to be tested. **At a point above the operating and operated Piezo bars the probe is sealed by a plug enabling air to be trapped above the side aperture means, the operating and operated Piezo bars are situated within this gap above the side aperture means the second housing.** The driver and driven discs are immersed in the test fluid below the side aperture means the first housing. **The test fluid can timeously flow into the probe through the base aperture means, air being displaced through the side aperture means allowing fluid to rise within the probe to approximately the level of the top of the side aperture means.** (Buchanan, p. 2, ll. 1-15; *emphasis added*).


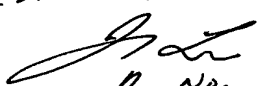
Thus, applying the teaching of the Buchanan reference to the Martin reference produces a system in which the Piezo sensor would not be immersed in the liquid to be tested. Since the principle operation of the measurement device disclosed in the Martin reference requires the Piezo sensor to be immersed in the liquid being measured, the application of the Buchanan reference to the Martin reference, as suggested by the Office Action, yields a non-functioning viscosity measurement device. Since the proposed modification of the Martin reference with the teachings of the Buchanan reference would render the viscosity measurement device disclosed in the Martin reference unsatisfactory for its intended purpose, there is no suggestion or motivation to make the proposed modification. Therefore, the Martin reference, Igaki reference, and the Buchanan reference do not render Claim 1 or its dependent Claims 2-7, 9-11, and 13-19 obvious under 35 U.S.C. §103. It is, therefore, respectfully requested that this rejection be withdrawn.

**CONCLUSION**

In light of the foregoing, it is respectfully submitted that all of the pending Claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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